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Costs of **Intimate Partner Violence** at the Household and Community Levels

An Operational Framework for Developing Countries

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Executive Summary

Violence in intimate relationships is the most common form of gender-based violence experienced by women across the globe. Nearly one of out of every three women has experienced physical, emotional, or sexual violence in an intimate relationship (Heise, Ellsberg, and Gottemeiler 2000). In 48 population-based surveys from around the world, between 10 percent and 69 percent of women reported being physically assaulted by an intimate male partner at some point in their lives (WHO 2002). This pervasive violence has significant economic, health, and social consequences. Economic consequences include the costs of providing health care and other services, increased absenteeism, decreased productivity, and lower earnings. Violence undermines women's health and well-being, directly and indirectly, causing chronic morbidity, increased depression, lower birth weight, and mortality. Among children, witnessing abuse leads to increased delinquency and gang violence. Overall, violence contributes to reduced quality of life of families and communities and decreased participation by women in democratic processes.

Though domestic violence exacts an enormous toll on society, putting a dollar figure on the actual cost is difficult. Yet to strengthen political will, it is essential to address this issue, ensuring required resources for responses and scaling-up of ongoing efforts. In the last decade, there has been growing attention to this field of inquiry, as evidenced by an increasing body of literature on the subject. Nearly 30 studies have been conducted which estimate the costs of domestic violence, primarily in industrialized countries. These studies have ranged from estimating costs in a particular sector (business, criminal justice, health, social services) to those at a particular level of government (municipal, provincial, national) to the aggregation of costs for a nation.

While the existing cost studies point to which costs can be estimated with what methods, few are directly applicable to most developing countries because of different social norms on the acceptability of violence, the lack of a policy framework and information systems, and differences in economic structure which affect valuation. In this paper, we attempt to develop an operational framework for estimating economic costs of domestic violence in developing countries taking these challenges into account. We argue that the costing of intimate partner violence (IPV) in developing countries needs to be undertaken at the **household and community level** and should focus on **monetary costs.**

Review of Studies: Nearly 30 studies reviewed indicate that the economic costs of IPV are enormous. Of these, a 1995 study in Canada by Greaves, Hankivsky and Kingston-Riechers found that the total annual cost to abused women and government agencies in Canada due to IPV is more than $4.2 billion (Canadian). Stanko et al. (1998) focused on one local municipality and estimated the costs to be in the range of 5-7.5 million pounds (British). Walby (2004) estimated national aggregate costs and found that the total cost for the United Kingdom was 23 million pounds (British). Estimates of costs in the United States have ranged from $3.5 billion (Womankind Worldwide 2002) to $5.8 billion (CDC 2003) to $12.6 billion (Women's Advocates 2002) and $67 billion (Miller et al. 1996).

The majority of the studies on economic costs of IPV conceptualize costs as direct and indirect. Direct costs represent the value of goods and services used in responding and preventing IPV. Some of the specific costs include police, legal and criminal justice, civil justice, and health costs, including medicines, social welfare and assistance, psychological care, property damages, housing, counseling, and treatment programs for perpetrators. Indirect costs represent value of goods and services lost as a result of IPV, and include: (1) the value of goods and services lost in the forms of income loss through job loss or increased absenteeism, decreased productivity in the workplace, and decreased labor force participation, (2) costs of increased mortality and morbidity, (3) pain, suffering, and loss in quality of life, (4) costs of increased drug and alcohol use, (5) inter-generational transmission of violence, (6) behavioral problems of children, and (7) reduced educational performance of children, to name a few. Most studies, however, focus on direct costs because few methodologies have been developed to address indirect costs. Still, a number of studies do attempt to estimate income loss and/or reduced economic output.

The literature review shows that three primary methodologies are used to estimate different elements of direct costs and some indirect costs. One is a proportional methodology which involves proportioning operational budgets of different service providers based on the extent the service provision is due to IPV. The other is an accounting methodology in which costs across sectors are estimated on the basis of prevalence and utilization data and then aggregated across sectors. A third methodology is imputing monetary values through econometric methods, used mainly to estimate indirect costs such as income foregone and productivity loss. Each method has specific challenges in terms of applicability in developing country contexts, especially the challenge of inadequate data.

Costing Framework for Developing Countries: Costing of IPV is particularly difficult in developing countries for social and economic reasons. Social norms of acceptability of IPV create a culture of silence on IPV, resulting in low disclosure, lack of services, minimal utilization of available services, and inadequate information systems. The economic structure of many developing countries also poses a challenge for cost estimation. In many developing countries, formal labor markets are less developed and informal economic activity predominates. According to the International Labor Organization (2004), in developing and transitional economies, informal sector jobs comprise one-half to three-quarters of all non-agricultural employment. In many countries – Benin, Chad, Guinea, and Kenya, for example – most of the female non-agricultural labor force is in informal employment. Moreover, in many developing countries, the household is a site of both production and reproduction. Women perform a large amount of paid and unpaid labor, including reproductive work, subsistence work, and community production. The extent of informal and unpaid household production makes it difficult to assign appropriate and accurate values to lost and reduced output and productivity as a result of violence against women.

A framework is needed to account for these differences. Existing cost studies have focused on aggregate costs building on costs of service provision. For developing countries, determining national aggregate costs is highly problematic given both the lack of attention to IPV, lower level of service provision, and inadequate information systems. A better starting point for cost estimation is the household level given the centrality of the household as a site of production and reproduction. Focusing on losses at the household level would resonate with households, communities, and national policymakers because it would highlight the implications for poverty – a central concern of these economies – the lack of a policy framework and information systems, and differences in economic structure which affect valuation.

We lay out an operational framework that considers a cost to be the direct or imputed value of goods and services: (1) used to prevent and respond to IPV; and (2) that are lost by households, community-level entities, and businesses as a consequence of IPV. The community-level entities could be either government or non-government. Although there are non-monetary costs such as behavioral impacts, health impacts, or inter-generational transmission of violence, this framework does not consider such non-monetary costs given the lack of applicability of existing methodologies to developing countries. The discussion focuses only on monetary costs at the household level and the community level, which includes service provision by community-level entities and the economic cost to businesses. The specific costs included in the framework at the household level are out-of-pocket expenditures by the household for utilization of services; income loss due to missed work and household work by members of the household; loss of productivity for the household enterprise; and missed schooling by children. At the community level are the costs of service provision such as health services, law enforcement services, judicial services, shelter services, and counseling services. For businesses, the costs include reduced earnings through absenteeism and productivity loss, and direct expenditures on provision of services, retraining, and turnover.

There are seven clear and essential steps required for implementing the costing framework.

- Define clear objectives for undertaking the costing exercise.
- Identify the level of aggregation most appropriate for the objectives of the costing exercise.

- Develop an operational definition of IPV that captures the experiences of the largest number of women.
- Map the help-seeking behavior of victims of IPV to determine the relevant services to consider in the costing exercise.
- Map the services available for victims of IPV.
- Determine which method or mix of methods is relevant.
- Supplement available data with appropriate surveys to fill data gaps in order to limit the assumptions that are made in the costing exercise.

A critical decision for undertaking cost estimation in developing countries is whether national surveys or representative surveys in selected communities should be implemented. An important consideration is the availability of resources. If resources are inadequate, it is possible to have generalizable results with careful selection of representative communities.

Conclusions: In this paper, we have attempted to develop a costing framework of IPV that is relevant to developing countries. We have argued that in such countries, the focus of attention needs to be on developing cost estimates at the household and community levels in order to galvanize national policymakers, civil society, and communities to address the pervasive phenomenon of IPV. Once a policy framework and specific public responses are in place, the exercise can be broadened to highlight the resources that are needed for effective public responses and to demonstrate the cost-effectiveness of interventions.

While increased resources to provide services to address IPV is urgent, the most effective solutions to preventing IPV lie in mobilizing communities to transform norms on the acceptability of violence within families. To this end, cost estimates demonstrating to families the drain of resources that IPV imposes on household economies would be irrefutable. Many civil societies groups working to prevent and respond to IPV in developing countries are acutely aware of the costs of such violence and highlight such costs in their awareness-raising campaigns. But the lack of monetary estimates is a big constraint in demonstrating the enormous impact IPV has on household economies.

The costing framework laid out here focuses therefore particularly on household-level costs. A step-by-step guide on estimating the components of household- and community-level costs has been provided to demonstrate the feasibility of estimation. As indicated, however, new data are needed to make these estimates. This framework can be used to advocate for investment in such data collection as well as improving and maintaining other information systems at the community service provision level.

This framework is not only relevant for IPV, which is the most common form of gender-based violence, but also can be applied to other forms of gender-based violence such as dowry violence, incest, and female genital mutilation. Demonstrating concretely the economic consequences of IPV will lay the basis for understanding the broader dynamics of violence against women across all its forms.

Introduction

Violence in intimate relationships is the most common form of gender-based violence experienced by women. An oft-quoted statistic is that one of every three women has experienced physical, emotional, or sexual violence in an intimate relationship (Heise et al. 1999). In 48 population-based surveys from around the world, between 10 percent and 69 percent of women reported being physically assaulted by an intimate male partner at some point in their lives (WHO 2002). This pervasive violence has significant economic, health, and social consequences.

The economic consequences of violence include the costs of providing health care and other services, increased absenteeism, decreased productivity, and lower earnings. Violence undermines women's health and well-being, directly and indirectly, causing chronic morbidity, increased depression, lower birth weight, and mortality. Among children, witnessing abuse leads to increased delinquency and gang violence. Overall, violence contributes to reduced quality of life of families and communities and decreased participation by women in democratic processes. However, since many of the economic consequences of violence are indirect, putting a dollar figure on the cost is difficult.

To strengthen political will to address violence against women, it is essential to provide evidence of the costs to society so that required resources will be allocated for responses and scaling-up of ongoing efforts. As pointed out by Laing and Bobic, "Once governments acquire a monetary portrait of violence, they will act to maximize benefits and minimize costs, which will ultimately work to reduce and eliminate domestic violence" (Laing and Bobic 2002: p.12). Devising a calculation for the costs of domestic violence—a problem widely perceived as a private problem within the confines of the intimate relationship between a woman and a man—will also bring this issue into the public domain. Moreover, the research results would help to identify effective responses to prevent domestic violence and contribute to the development of monitoring and evaluation systems.

In the last decade, there has been growing attention to the estimation of costs, as evidenced by an increasing body of literature on the subject. Nearly 30 studies have been conducted which estimate the costs of domestic violence, primarily in industrialized countries. These studies have ranged from estimating costs in a particular sector (business, criminal justice, health, social services) to those at a particular level of government (municipal, provincial, national) to the aggregation of costs for a nation. However, as of yet, there has been no framework for the costing of violence in developing countries, which is urgently needed. In many developing countries, domestic violence still is absent from the national agenda despite increasing evidence that domestic violence is a pervasive phenomenon (DHS 2004), and that it is often disproportionate among the poor (Heise 1998; Ellsberg 1999). Most African and Asian countries have yet to formulate laws or national plans of action that can address and respond to the issue.

In this paper, we attempt to develop an operational framework for estimating economic costs of domestic violence in developing countries. This framework has been developed on the basis of the existing work on estimation of costs. In section 1, we present a brief overview of the literature to highlight the key issues in a costing framework. We then turn in section 2 to outlining a framework relevant to developing countries, followed by a discussion in section 3 of specific methodologies and the data requirements of each. In the final section, some of the key research gaps and a future agenda are identified.

Section 1: Review of Literature

1.1 Key Findings

The health-related, economic, and social costs of domestic or intimate partner violence (IPV) against women – on women themselves, their families, and social and economic development – are considered by researchers to be enormous. For instance, the World Bank (1993) estimates the loss of 9 million years of disability-adjusted life years (DALYs) each year worldwide as a result of rape and IPV, more than that lost due to all known types of cancer. The Victoria Department of Human Services in Australia evaluated the burden of disease associated with IPV. Its findings show that IPV is the greatest risk factor for disease, causing the largest impact on the health of women older than 45. For women between the ages of 15-44, IPV is the leading contributor to death, disability, and illness (VicHealth 2004). Violence against women also generally has been found to be the third highest cause of death in Mexico City (Acencio 1999).

The majority of costing studies of violence refer to the experiences of Western industrialized countries such as Australia, Canada, Finland, New Zealand, and the United Kingdom, where systems of information and services are well developed. In the costing studies surveyed, the definitions of violence vary considerably. One reason for this is that the literature contains a range of concepts of violence, including interpersonal violence, family violence, domestic violence, or IPV. The definition within each concept determines the size of the population experiencing violence. These variations are significant because prevalence rates often determine the basis of the methodological formula to estimate economic costs.

The key studies are summarized below in Table 1.

Table 1: Key Cost Estimates of Violence Against Women—Industrialized Countries

Source	Costs Calculated	Total Cost
Roberts 1988 Queensland, Australia	Police Legal Benefits Emotional Health Support Productivity lost	$108.65 million (Australian)
NSW Women's Unit 1991 New South Wales, Australia	Medical (doctors, counselors, psychiatrists, hospital, medication; income forgone); shelter & legal services (accommodation, legal, income forgone); government services; employer costs	$1,525 billion (Australian) (1990 values)
Blumel et al. 1993 Queensland, Australia	Medical and hospital Legal Counseling Lost income Perpetrator programs	$620 million (Australian) for VAW $556 million (Australian) for DV sample only
Mansingh & Ramphal 1993 Kingston, Jamaica	Direct medical	$1.1 billion (US)
KPMG 1994 Tasmania, Australia	Services Income support Housing (damage to property) Children Employment effects	$17,761 million per year (Australian)

—continued

Table 1 *(continued)*

Source	Costs Calculated	Total Cost
Snively 1994 New Zealand	Medical care Social welfare and assistance Legal and criminal justice Employment Health costs	$1.2 -$5.3 billion (New Zealand)
Day 1995 Canada	Health Costs	$1.5 billion (Canadian)
Greaves, Hankivsky, and Kingston-Riechers 1995 Canada	Health/Medicine Criminal Justice Services/Education Labor/Employment	$4.2 billion (Canadian)
KPMG 1996 Northern Territory, Australia	Services Police Housing Medical childcare Counseling Support Income support	$8.86 million per year (Australian)
Kerr and McLean 1996 Canada	Income support Policing Corrections Criminal injury compensation Victim support Counseling Aboriginal programs Mental and drug care Sexual/women assault centers Loss of paid and unpaid work time Children's programs Treatment programs for perpetrators	$385 million (Canadian)
Miller, Cohen, and Wiersema 1996 USA	Property damage Hospital and physicians Non-hospitalization injury Mental health care Police and fire services Productivity loss Pain and suffering	DV component: $67 billion (US) Personal Crime: $450 billion (US) ($300 billion are costs of victim pain and suffering)
Korf, Meulenbeck, Mot, and Van den Brandt 1997 Netherlands	Police and justice Medical Psychosocial care Labor Social security	$142.2 million (US)
Stanko, Crisp, Hale, and Lucraft 1998 Hackney, London, UK	Social services Civil justice Police Housing Refuge Health	5-7.5 million British pounds
Morrison and Orlando 1999 Chile and Nicaragua	Employment Health services Children's educational achievement	In Chile: reduced earnings of $1.56 billion (US) In Nicaragua: reduced earnings of $29.5 million (US)

Table 1 *(continued)*

Source	Costs Calculated	Total Cost
Godenzi and Yodanis 1999 Switzerland	Medical treatment Police and justice Support Shelters Counseling	$290 million (US)
Wisner et al. 1999 Minnesota, United States	Direct medical	$4,341 (US) per patient
Songer, Cohen, Ettaro, and Staren 2000 Pennsylvania, United States	Health care costs (crimes, domestic violence, and suicide)	$86 million (US)
Henderson 2000 Brisbane City Council Australia	Staff turnover Absenteeism Diminished work performance Tax share of relevant public sector costs	$1.5 billion per year (Australian)
New & Berliner 2000 Washington, United States	Direct medical (mental health treatment costs)	$3,087 (US) per patient (median of 15 sessions)
Piispa and Heskanen 2001 Finland	Medical costs Social services Therapy Criminal justice system Loss of productivity Value of life lost	$592 million (FIM)
Australian Institute of Criminology 2001 Australia	Legal services Incarceration Victim compensation Lost earnings Opportunity cost of lost time	$14.2 million (Australian)
Health Canada 2002 Canada	Direct medical	$1.1 billion (Canadian)
Womankind Worldwide 2002 United States	Direct medical Legal services Policing Employment and workers' productivity Psychological costs Lost earnings Opportunity cost of time	$3.5 billion (US)
Women's Advocates 2002 United States	Legal services Direct medical Policing Incarceration Other monetary costs (shelters) Lost earnings Opportunity cost of time Employment and workers' productivity	$12.6 billion (US)

Table 1 *(continued)*

Source	Costs Calculated	Total Cost
National Center for Injury Prevention and Control 2003 USA	Medical services (including mental health) Lost economic output	$5.8 billion (US)
Walby 2004 Great Britain	Criminal justice system Health care Social services Housing Legal Economic output losses (employers and employees)	23 billion British pounds

Source: Adapted from: WHO (2004), Walby (2004), and Laing & Bobic (2002)

All of the studies described above find that the economic costs of domestic violence are enormous. A 1995 study in Canada by Greaves, Hankivsky and Kingston-Riechers found that the total annual cost to abused women and government agencies in Canada due to IPV is more than $4.2 billion (Canadian). Stanko et al. (1998) focused on one local municipality and estimated the costs to be in the range of 5-7.5 million pounds (British). Walby (2004) estimated national aggregate costs and found that the total cost for the United Kingdom was 23 million pounds (British). Estimates of costs in the United States have ranged from $3.5 billion (Womankind Worldwide 2002; Worldwide 2002) to $5.8 billion (CDC 2003) to $12.6 billion (Women's Advocates 2002) and $67 billion (Miller et al. 1996). The differences in the estimates are due to the range of costs included in the estimation. For example, the Miller, Cohen, and Wiersama estimate is higher than other U.S. estimates because they affix a monetary value to pain, suffering, and loss of quality of life. Walby (2004) also found that the monetary value of "human and emotional costs" is more than double all costs of service provision and loss of economic output.

Among developing countries, few studies on the costs of violence are available. One study by Mansingh and Ramphal (1993) estimated the direct costs of treating victims of IPV in Jamaica's Kingston Public Hospital in 1991 to be $454,000. Another study conducted by the Inter-American Development Bank in Chile and Nicaragua in 1999 (Morrison and Orlando 1999) examined the impact of IPV on earning capacity. This study estimated that in Chile, all types of IPV reduced women's earnings by $1.56 billion (more than 2 percent of Chile's gross domestic product (GDP) in 1996); and in Nicaragua, earnings were reduced by $29.5 million (about 1.6 percent of the 1996 GDP of Nicaragua). In both countries, abused women earned far less than non-abused women. Beyond effects on women's earnings, the Nicaraguan study noted that 63.1 percent of the children of female victims had to repeat a school year; those children also left school an average of four years earlier than other children. Moreover, children who witness abuse or who are victims themselves tend to imitate that behavior and perpetuate the cycle.

Overall, IPV against women costs individuals, families, communities, and countries millions of dollars in health care, police, and legal costs, and direct economic costs such as lower accumulation of human capital, lower productivity, lower rates of savings, and lower rates of investment (A. Morrison and M. Biehl 1999).

In all the studies on the economic costs of domestic violence, several key factors are critical to cost estimations and the methodologies utilized for these estimations. They are: (1) the definition of domestic violence, (2) the measurement of violence, (3) the conceptualization of the help-seeking behavior of those experiencing violence, (4) the categorization of costs, (5) methodological challenges such as the timeframe and unit of analysis, and (6) data collection methods.

1.2 Definition of Domestic Violence

The definition of domestic violence is crucial to the estimation of economic costs because it determines the population, the forms of violence, and the range of services to be included in the costing exercise. However, the definition of domestic violence is highly contested between government representatives and women's groups in many countries. While women's groups usually advocate for a broader definition that reflects a woman's experience – domestic violence is a multifaceted and frequent phenomenon perpetrated by a range of partners – official service agencies often use a narrower definition restricted to one form, such as physical violence, and confined to a recognized legal spouse. Key parameters in the definition of violence are: (1) between whom, (2) which acts, and (3) with what frequency. These parameters in turn are influenced by the norms of acceptable behavior, which vary considerably across cultures.

A central issue is whether domestic violence is framed as an exclusively interpersonal act or seen as an expression of power that perpetuates the subordination of women. If it is the former, the definition would only include those acts that might be seen as crimes and thus focus only on acts that result in physical evidence. If it is the latter, the definition of domestic violence would include all acts within the home of "physical, verbal, visual or sexual abuse that are experienced by women or girls as threats, invasion or assaults and that have the effect of hurting her, or degrading her and/or taking away her ability to control contact (intimate or otherwise) with another individual" (Koss et al. 1994).

A frequent perception of domestic violence is that it is limited to physical harm perpetrated on adult women within a marital relationship. This assumes that women primarily live in nuclear families. More often than not, however, living arrangements range from joint families to nuclear families to single-parent families. Violence often is not restricted to the current husband but may extend to boyfriends, former husbands, and other family members such as parents, siblings, and in-laws. A definition that acknowledges these multiple possibilities would lead to interventions that likely include the experiences of all women. Below are most common terms found in the literature.

Interpersonal Violence

Interpersonal violence is described in WHO's *The Economic Dimensions of Interpersonal Violence* as "violence between family members and intimates, and violence between acquaintances and strangers that is not intended to further the aims of any formally defined group or cause" (WHO 2004: p.2). In other words, all violence that is not driven by an agenda of a collective group is within the purview of the study.

Family Violence

Family violence encompasses violence between members of a family, whether nuclear or joint or whether residing in the same residential structure. In other words, family violence includes violence between husbands and wives, parents and children, siblings, in-laws, and/or other relatives. In many Latin American countries, the laws focus on family violence rather than domestic violence, defining the problem as larger than that between wives and husbands which also garners broader political support.

Domestic Violence

Domestic violence usually narrows the scope to violence between members of the same household, i.e. sharing the same dwelling. It could also encompass violence between those who formerly resided in the same household. Elizabeth Stanko, et al. in *Counting the Costs: Estimating the Impact of Domestic Violence in the London Borough of Hackney*, defines domestic violence as "abusive and assaultive behaviour between intimates, among members of a household, and/or between former partners" (Stanko et al. 1998: p.12). In a recent U.K. study by Walby (2004), domestic violence is limited to violence between intimates and excludes violence by family members who are not intimates.

Intimate Partner Violence

IPV is a narrower concept encompassing violence between adults in an intimate relationship, usually of a sexual nature. It includes individuals either in a current or recently ended relationship. The U.S. Centers for Disease Control and Prevention (CDC) defines IPV as "violence committed by a spouse, ex-spouse, or current or former boyfriend or girlfriend" (CDC 2003: p.3).

Violence and the Law

Another issue with respect to the definition of violence is the relationship between the forms of violence experienced by women and the legal definitions. Most studies do not consider this to be an issue and do not attempt to align the forms of violence with legal categories of crime. Walby's study (2004) is the only one that undertook this exercise, as she relied on unit costs developed in previous cost of crime studies undertaken by the Home Office. She selected the categories of homicide, serious wounding, other wounding, common assault (without injury), rape and assault by penetration, and sexual assault (non-penetrative). She then further divided these into terms depicting the types of different behaviors such as choking or strangulation, using a weapon, kicking, hitting with fists, threatening to kill, threatening with a weapon, stalking, and pushing or slapping. A constraint of Walby's study is that emotional, financial, and psychological abuse were not considered even though these forms of abuse have a significant impact on pain, suffering, and quality of life leading to mental health consequences and losses of productivity.

1.3 Toward an Operational Definition: IPV

Most of the studies in the literature establish parameters of domestic violence as those experiencing violence perpetrated by current or former spouses/lovers/girlfriends/boyfriends, or "by someone who is known to the victim." With the exception of Walby, almost all of the studies also establish women as the victim, though the concept includes violence experienced by men. The operational definition of most of these studies is IPV, regardless of the formal status of the relationship. In many developing countries, this definition would be the most applicable because it captures the range of relationships between the two sexes – dating, cohabitating, and marital.

IPV also is multifaceted and includes physical, psychological, sexual, and financial abuse. In the literature on IPV, there is a broad consensus on the set of behaviors constituting each form of abuse. Physical violence includes behaviors such as slapping, kicking, hitting, beating, pushing, choking, burning, and threatening and assaulting with a weapon. Psychological abuse includes demeaning, insulting, threatening, isolating, and abandoning behaviors. Sexual violence behaviors include sexual coercion, refusing condom use, sexual harassment, and rape. Financial abuse includes deprivation of material goods, control of money, and control over assets. In the costing studies surveyed, the primary focus is on physical, sexual, and psychological abuse within the intimate relationship (Roberts 1988; Associates 1991; KPMG 1994; Stanko, Crisp et al. 1998; Yodanis and Godenzi 1999). There is, however, some divergence in how rape and sexual assault are treated. Most studies consider both rape and sexual assault to be part of the behaviors that constitute IPV (Roberts 1988; Associates 1991; KPMG 1994; Stanko, Crisp et al. 1998; Yodanis and Godenzi 1999; Walby 2004). Others perceive that rape and sexual assault require specialized services and thus calculate costs of these separately (Blumel et al. 1993; Greaves et al. 1995; Miller, Cohen et al. 1996).

Another important dimension of IPV is that it is a repeated experience. In a study of 10,000 women in India, of those who reported physical violence in the last 12 months, approximately 50 percent reported experiencing it more than three times (ICRW and INCLEN 2000). Frequency is a critical dimension to consider because it has implications for measurement of violence and the utilization of services.

The definition of IPV that captures most of the various types of abuse that women face from their intimate partners comes from *The Financial and Economic Costs of Domestic Violence in the Northern Territory*. The Office of Women's Policy defines domestic violence as "Behaviour adopted by a person to control their victim that results in physical, sexual and/or psychological damage, forced isolation or economic deprivation, or behaviour that leaves the victim living in fear. These behaviours are perpetrated by someone who is known to the victim" (Green et al. 1996: p.52).

We suggest that for developing countries, IPV should include all forms of violence as outlined in the definition above, including financial abuse. For example, in many of the Asian countries where income-pooling within the household is the norm, deprivation of food, money, and shelter are important forms of violence reported by women. In a study of women in West Bengal, a significant majority of the women surveyed reported deprivation of food and shelter (Shramajibee Mahila Samity 2002).

1.4 Measurement of Intimate Partner Violence

IPV generally is measured in one of two ways: the number of women experiencing violence or the number of incidents. The former is referred to as the prevalence rate and the latter as the victimization rate. Assessing the prevalence rate has the advantage of determining the number of people to include in the cost analysis. In particular, according to the CDC, "one needs to know how many people were injured non-fatally as a result of IPV, how many used medical and mental health care services after [an] IPV victimization, and how many lost time from paid work and household chores after IPV" (CDC 2003: p.13). The victimization rate, on the other hand, is critical for assessing the impact on services; people experiencing violence may indeed access services multiple times.

Determining the prevalence rate of IPV in a given region or country is often difficult. As noted in the definition of violence, the norms of acceptable behavior and the nature of violence in the intimate relationship affect the measurement of prevalence. Norms of acceptable behavior influence non-disclosure by women in surveys, lack of reporting to police, and unwillingness to go to court or seek outside support (VicHealth 2004). Norms also influence whether a single experience of a violent behavior is perceived as violence—in many societies, a slap here and there, a few insults or an occasional knock are all seen as normal behavior within the intimate relationship. Violence in intimate relationships is often multifaceted and behavior is often repeated. A measurement issue is whether to include women who experienced only one form one time, or if there has to be a minimum criterion of x forms and/or y times. If violence is conceptualized as a pattern of control, then a minimum set of behaviors or frequency can be assumed. Some researchers have attempted to create a severity index to refine the measurement of prevalence.[1] However, most studies fail to analyze how, or whether, the conceptualization of violence as a pattern of behavior has had an impact on the measurement of prevalence.

Another measure of violence is the number of incidents or number of victimizations as referred to in the crime literature. In studies looking at crime, the key measure that is utilized is the number of victimizations rather than the number of people, which captures the fact that people sometimes face multiple attacks (Cohen et al. 1994). In terms of violence within the intimate relationship, women often experience repeated behaviors, resulting in repeated injuries and their repeat use of services. However, few studies discuss how to systematically integrate these two measures of violence (prevalence and victimization) in cost estimations. Most studies rely on prevalence as the basic measure of violence. CDC defines three measures of violence: prevalence, incidence, and victimization rate. According to the CDC, "Incidence is the number of separate episodes of IPV that occurred among U.S. women ages 18 and older during the 12 months preceding the survey. For IPV, incidence frequently exceeds prevalence because IPV is often repeated. In other words, one victim (who is counted once under the prevalence definition) may experience several victimizations over the course of 12 months (each of which contributes to the incidence count)" (CDC 2003: p.15). In epidemiological literature, on the other hand, incidence refers to new cases. The CDC's "victimization rate" refers to the number of IPV victimizations among women 18 and older per 1,000 women of that population. When injuries resulted from multiple forms of violence in a particular incident, service usage was gathered for the most severe form. Walby includes the number of incidents and develops a range of repeated acts experienced for each behavior in her definition of IPV. However, she does not systematically employ this measure to gauge service utilization, especially of health services, but for each behavior, limits measurement to the experience of worst violence.

For cost estimation purposes, it is crucial to measure both the number of women experiencing violence (prevalence rate) and also the number of incidents (the victimization rate). The frequency of victimizations is

[1] The Morrison and Orlando study differentiated between moderate physical violence and severe physical violence. "Moderate physical violence occurs when a women's partner slaps her, holds her against her will, or shoves her. These actions must have occurred fewer than five times in a year. If they occur more often, they fall into the next category. Severe physical violence occurs when a women suffers more than five acts of moderate physical violence in a year, if her partner has kicked her, hit her with an object, burned her intentionally, cut her with a knife, or choked her, or if her partner's violent behavior causes her injuries such as body aches, broken bones, loss of consciousness, or any type of injury that requires medical attention" (Morrison and Orlando, 1999:p.53).

important to include because each incident of violence disrupts households, regardless of whether it leads to service utilization.

1.5 Help-Seeking Behavior

Conceptualization of the help-seeking behavior of those experiencing violence is a crucial component of defining who and what is included in the estimation of costs of violence. What are the different response strategies of those who experience domestic violence? The violence literature indicates that a majority of women who experience violence in fact rarely seek help, instead suffering in silence. Among those who do seek help, the overwhelming majority turn to non-formal networks, such as family, friends, neighbors, religious institutions, or local leaders (Heise, Ellsberg et al. 1999; ICRW and INCLEN 2000; ICRW 2002). A larger proportion of women seek both institutional and non-institutional medical help, but they rarely indicate that their need for health services stems from domestic violence. A very small proportion of those who seek help turn to formal services such as the police, courts, and social services. There is no estimate of the number of women who actually leave the violent relationships and rebuild their lives – the final response to violence.

Only two costing studies pay particular attention to conceptualizing the stages of help-seeking. The first, by Distaff Associates (1991), distills three stages of response: (1) no acknowledgement and non-disclosure, (2) acknowledgment and utilization of services, and (3) building an alternative life. This three-stage approach has been implicitly incorporated into later costing studies. Another study, that of Stanko, et al. (1998), lays out an approach of help-seeking behavior where direct and indirect costs can be measured in three different stages: (1) approaching family, friends, neighbors, and local community (otherwise referred to as site of first response), (2) approaching formal processes and systems, and (3) accessing help from informal and formal systems to rebuild and heal. Most studies focus on the second stage because data are most available for utilization of formal services. However, Stanko argues that a comprehensive cost estimate would include all three stages. In other words, most of the aggregate costs estimated in the literature are partial because they do not include all responses to violence.

The fact that women often access services more than once also is lost in studies basing estimations on the prevalence rate. Many studies also neglect to project potential cost – i.e., the cost of providing services should all who experience violence utilize services. Most often the aggregate costs only account for those who use services, as opposed to the number who are *likely* to use services. However, the effectiveness of policy decisions and monitoring of interventions depends on both an understanding of current costs *and* potential costs, especially if strategies result in an uptake of services.

1.6 Conceptualization of Costs

Existing studies estimate costs in specific sectors such as health (Day 1995; Rudman and Davey 2000), business (Henderson 2000), and health care and economic output (CDC 2003); across different sectors whether public (Stanko, Crisp et al. 1998) or public and private (Yodanis and Godenzi 1999; Piispa and Heiskanen 2001) services (Associates 1991; Blumel, Gibb et al. 1993; KPMG 1994; Snively 1994; Greaves, Hankivsky et al. 1995; Kerr and McLean 1996; Korf et al. 1997; Morrison and Orlando 1999); and services, employment, and pain and suffering (Miller, Cohen et al. 1996; Andalusia 2003; Walby 2004). The underlying conceptualization of costs in these studies is the rudimentary differentiation between direct and indirect costs.

Direct costs represent the value of goods and services used in responding to domestic violence. Buvinic, et al. in "Violence in the Americas: A Framework for Action" from *Too Close to Home* defines direct costs as "the value of goods and services used in treating or preventing domestic violence" (A. Morrison and M. Biehl 1999). The CDC defines direct costs as "the actual dollar expenditures related to IPV" (CDC 2003). In most of the studies, direct costs are estimated across different sectors, including law enforcement, judicial, health, and social services. Some of the specific costs include police, legal and criminal justice, civil justice, and health costs, including medicines, social welfare and assistance, psychological care, property damages, housing, counseling, and treatment programs for perpetrators. Under each category, a set of specific costs are usually measured. For example, under health

care costs, studies include emergency department visits, hospitalizations, outpatient clinic visits, physician visits, dentists, physical therapists, mental health professional services, and medicines (Greaves, Hankivsky et al. 1995; Stanko, Crisp et al. 1998; Yodanis and Godenzi 1999; Piispa and Heiskanen 2001; CDC 2003; Walby 2004). To determine the distribution of the cost burden among various agents, some of the studies distinguish between those services provided by the government, the private sector, and a mix of the two (Greaves 1995). Individual out-of-pocket expenses are included in some studies (Day 1995; CDC 2003; Walby 2004).

Indirect costs, as defined by the Office of Women's Policy in the Northern Territory in Australia, are "total costs incurred by virtue of, but not as a direct result of, the violent domestic relationship" (Green, Murfett et al. 1996: p. 57). Indirect costs include: (1) the value of goods and services lost in the forms of income loss through job loss or increased absenteeism, decreased productivity in the workplace, and decreased labor force participation, (2) costs of increased mortality and morbidity, (3) pain, suffering and loss in quality of life, (4) costs of increased drug and alcohol use, (5) inter-generational transmission of violence, (6) behavioral problems of children, and (7) reduced educational performance of children, to name a few. These costs, which largely affect the individual and family, may actually dwarf the direct costs of IPV, yet few studies have attempted to develop methods to estimate these indirect costs.

Indirect costs of IPV are notoriously difficult to calculate. Most studies measure direct costs such as income loss through job loss and/or increased absenteeism (Stanko, Crisp et al. 1998; Yodanis and Godenzi 1999; Walby 2004). However, productivity loss also encompasses non-monetary costs and is the basis of economic multiplier effects, such as lower earnings, labor force participation, and investment and savings. Women working while in a violent relationship noted that "they were not able to separate the trauma of their personal life from their work life, resulting in either lost days or poor performance" (KPMG 1994). Only three studies (Roberts 1988; Distaff Associates 1991; Henderson 2000) attempt to estimate productivity loss, but none detail how productivity loss was measured. Morrison and Orlando (1999) attempt to estimate productivity loss by establishing reduced earnings of women who have experienced abuse. Walby also does not measure productivity loss but measures lost economic output due to domestic violence injuries. This measure includes "the value of lost earnings plus any non-wage payments made by the employer, national insurance contributions, etc." (Walby 2004: p.89).

From a public health perspective, there have been attempts to estimate loss in terms of morbidity and mortality. A World Bank study estimated that annual rates of rape and domestic violence translated into 9 million years of disability adjusted life years (DALY), including years lost to premature mortality as well as the actual time lost because of disability or illness (World Bank 1993). Other cost studies have estimated the loss due to premature mortality (Piispa and Heiskanen 2001; CDC 2003).

However, opinions differ on whether to impute a monetary value on pain and suffering. Kerr and McLean, Stanko, and others argue "in no way can we 'cost' the horrifying physical and psychological damage of this violence to the women and children" (Kerr and McLean 1996: p. 3). In contrast, Miller, Cohen, and Wiersama (1996) argue "intangible pain, suffering, and lost quality of life exceed all other tangible categories combined." Walby (2004) attempts to estimate the human and emotional cost of fear, pain, and suffering based on a methodology developed by other costing exercises on traffic accidents, crime, and health.

Dividing costs into "direct" and "indirect" is problematic. The impact of violence has short- and long-term effects across individuals, communities, and societies that are both economic and social in nature. Yet many of these ripple effects are simply categorized together as "indirect" – a large black box that is rarely deconstructed and rarely estimated. A more useful typology that distills indirect costs of violence is suggested by Buvinic et al. (1999). This Buvinic et al. foundation lays out a costing framework in line with the impacts of violence. It also distinguishes between economic and social costs, those that are monetary or have an imputed monetary value, those that are non-monetary, and those where it is not possible to establish a monetary value.

- **Direct costs** refer to the value of goods and services used in treating or preventing violence. The costs include service-related costs as well as costs of programs for prevention and advocacy.
- **Non-monetary costs** capture human costs, including increased suffering, morbidity and mortality; abuse of alcohol and drugs; and depression.
- The broader economic effects of violence against women are described as **economic multiplier effects** and include such aspects as increased absenteeism; decreased labor market participation; reduced productivity; lower earnings, investment and savings; and lower inter-generational productivity.
- **Social multiplier effects** are described as the impact of violence on interpersonal relations and quality of life. These include the effect on children witnessing the violence, reduced quality of life, and reduced participation in democratic processes.

1.7 Common Methodologies and Costs Calculated

The studies reviewed use a wide variety of methodologies to calculate costs because the type of costs being calculated are different. Common direct costs calculated include costs associated with medical and mental health services, the judicial system (criminal and civil), incarceration, and relocation expenses. Common indirect costs include production loss caused by death, earnings forgone (nonfatal), lost lifetime earnings (fatal), and number of days lost of both paid and unpaid activity.

The most common method for estimating direct costs, when reliable prevalence rates are available, is to determine what proportion of individuals are using services as a result of IPV, to what extent these services are being utilized, and the unit cost of these services (Greaves, Hankivsky et al. 1995; Piispa and Heiskanen 2001). However, in many countries there are significant gaps in the required data. For example, even if prevalence is known, accurate information on services utilization rates may not be available. Lack of data often leads to reliance on assumptions based on extrapolated data or the use of proxy data.

When using this methodology, one must determine a proper utilization rate of services, the unit cost of service and whether the full cost of the service should be attributed to domestic violence. Service usage tends to be inhibited by social norms of acceptability of violence as well as norms limiting women's mobility. Studies often use the utilization rates from records of service providers, which often underestimate the potential demand for services.

Regarding unit cost of service, most studies rely on data from other studies that have estimated the cost of an average hospital visit, doctor visit, police action, etc., even if the utilization of the service is not due to domestic violence. Walby, for example, uses unit costs for medical services developed in the costing exercises for road traffic accidents. While using proxy data may be relatively unproblematic for medical services on the assumption that an injury is an injury regardless of the cause, it may not be suitable in the case of a police response, which varies considerably with both the level of the crime and the underlying situation that led to the crime. A similar situation is evident in the study by Yodanis and Godenzi (1999) in which an average cost of court cases is applied to all legal petitions filed by women such as divorce, protection order, or separation order. This example is also relevant to the third issue of whether it is appropriate to apply the full cost of the service or only that proportion which reflects the cost of the service due to domestic violence.

Lawrence and Spalther-Roth lay out a general model, widely used in the literature, of direct costs expressed as

$$TC = \sum_{i=1}^{n} p_i C_i$$

which is the sum of *cost of service i multiplied by the proportion of those who use service i because of domestic violence*. This has two problems: (1) what is included in the calculation of C*i*, and (2) what is the appropriate proportion to use for each service. The first basic decision has to be whether to cost the full cost of service *i* or *partial cost*. Lawrence and Spalter-Roth suggest that the criteria is whether the service would have been provided or not in the absence of domestic violence. If the former, then C*i* should only reflect the marginal or additional cost of providing the service for

an individual experiencing domestic violence. As marginal costs are difficult to establish, most authors use average cost data of providing the service as a proxy, often leading to an overestimation of the true cost because average cost is higher than marginal cost. In terms of the appropriate p*i*, the issue centers on establishing a direct causality between a cost and domestic violence. For example, if a cost such as a treatment program would have been utilized by an individual even in the absence of domestic violence, then p*i* needs to be adjusted downward to reflect those who would have used the service anyway.

In the absence of cost per service, a second method of determining cost is taking the actual operational budget of an organization and/or department that is dedicated to serving victims or perpetrators of IPV. For instance, according to *The Health-Related Costs of Violence Against Women in Canada: The Tip of the Iceberg*, Canada in 1993 had 371 transition homes—"any safe shelter for women and their children escaping from a violent home situation." Total annual expenditures for this service were calculated at $135 million (Canadian) (Day 1995). For services such as policing, where the population served is larger than those experiencing domestic violence, the above method is modified by estimating the proportion of the total cost that can be attributed to domestic violence. This proportion is often estimated by determining institutional prevalence, i.e. utilization of that service by women experiencing domestic violence. Unfortunately, institutional prevalence is often difficult to assess because most organizations do not systematically record the reason for using the service.

The calculation of indirect costs such as lost lifetime earnings due to mortality and loss of income due to injury is even more complex because of the additional challenge of imputing a monetary value to these costs. For example, to estimate the loss of income due to injury, it is necessary to determine the mean daily value of earnings and gather data on the lost days from paid work. Because women across different age groups experience violence, the CDC calculates the mean annual earnings of the mean victimization age group and divides that number by the number of paid work days per year to arrive at mean daily value of earnings. Then, to calculate the total value of lost days from paid work, the mean daily value of earnings is multiplied by the total days of earnings lost (CDC 2003). Studies have also attempted to estimate the lost lifetime earnings due to mortality, morbidity, mental health distress, and incarceration (for men). This human capital approach (valuing only on the basis of lost productivity) includes significant assumptions around the discount rate used to measure present value of earnings. Most studies assume a discount rate of 3 percent, which was set by Miller and Cohen as the norm. The drawbacks of this approach are noted by Miller and Cohen: "This 'human capital approach' to valuing life ignores the pain, suffering, and lost enjoyment of life. Instead, it counts the monetary costs of death. This method is appropriate if one is interested solely in the effect of deaths on economic activity, as measured by the gross national product, and on household production." (Cohen, Miller et al. 1994: p.20).

An alternative methodology has been used by Morrison and Orlando of econometrically estimating the impact of violence on women's labor force participation and earnings. This method includes variables that measure the presence of IPV apart from the standard explanatory variables such as age, education, and hours worked. However the variables used to indicate presence of violence, such as physical abuse in childhood and number of times husband arrives home drunk, also can have a direct impact on earnings; simultaneity is in fact a basic problem with econometric approaches. Further econometric methods require a large data set for statistically valid results.

Only a few studies have attempted to estimate the cost of the impact on children. Morrison and Orlando evaluated the impact of domestic violence on children in terms of grade repetition and parent notification of academic and disciplinary problems (Morrison and Orlando 1999) but did not attempt to capture the monetary implications of performance. Miller and Cohen (1996) argue that pain and suffering need to be acknowledged as a cost that is often larger than the cost of provision of services, thus prodding societies to emphasize prevention. In their estimation of the cost of pain, suffering and loss of quality of life, Miller and Cohen use two approaches: "willingness to pay" and "willingness to accept" (or compensation). The willingness-to-pay estimates are based on values that

workers (or consumers) place on small risks of injury or death, whereas "willingness to accept" estimates are based on actual jury awards for identified individuals who were injured. Both have been extensively used in the literature on cost of injury, primarily due to road accidents. Miller and Cohen have used the compensation approach to determine a typical jury award compensating medical and psychological costs as well as lost workdays. Walby (2004) uses a similar approach relying on data from the Department of Transport; she estimated a monetary value that individuals would be willing to accept to compensate for different injuries.

These methodologies would be extremely difficult to apply in developing countries. The willingness-to-pay method has been used in the environmental literature, but there is little application to injuries in most developing countries. Given the lack of developed jurisprudence on jury awards for pain and suffering, the compensation method is equally difficult. Another difficulty of these methods is that they are based on the assumption of a market economy in which every interaction is based on demand and supply and can be assigned a monetary value. This is not the case in many developing countries, where a large part of the economy is still non-monetized—most women are "unpaid" workers in the household enterprise or casual labor in the informal sector—and there is limited understanding of the real value that the market wage represents. Also, in the case of IPV, it is arguably difficult to assess what triggers the violence and to determine what actions could lessen the probability of such an event occurring again. In that case, it would be highly problematic for an individual to assess the value of risk.

In sum, three methodologies are used in the available studies: (1) the proportional methodology; (2) an accounting methodology, which derives a unit cost, either per woman or incident, applies this to a prevalence or victimization rate, and aggregates across sectors; and (3) a methodology to derive imputed values for non-monetary costs. All the methods have the advantage of making the cost of IPV comparable to other issues and thus inform allocation of public funds. However, none gives a comprehensive estimate of cost, thus potentially underestimating the actual costs. Because no one suitable methodology exists, determining the method or mix of methods to be employed depends on the purpose of the costing exercise and the availability of data.

1.8 Methodological Challenges

All of the studies face certain key methodological challenges. Godenzi and Yodanis categorized these into four main themes: operationalization and measurement, unit of analysis, time frames, and population inferences (Godenzi and Yodanis 1999).

Operationalization and Measurement

Lacking comprehensive data, all studies faced significant problems of operationalization and measurement, leading to "omitted dimensions and indicators, [and] assumptions and estimates, [which]…weaken the validity and reliability of measures of the cost of violence against women" (Godenzi and Yodanis 1999: p.4). The literature review revealed many of these shortcomings. Many studies did not develop the unit cost of service provision specifically for domestic violence, but applied average unit costs developed in other contexts. One such example is found in *The Health-Related Costs of Violence Against Women in Canada: The Tip of the Iceberg*. To calculate the dental costs associated with violence against women, data from a survey on abuse among elderly dental patients was used to approximate the number of women who went to the dentist due to victimizations. This data was used despite the fact that the male elderly were included in those figures and non-elderly females were not (Day 1995). Walby applies monetary values of "human and emotional costs" developed in the context of road accidents to outcomes of domestic violence, even though the underlying dynamics of risk are in no way similar; the assumption is that the loss of life and limb in the two situations has the same emotional impact. Other studies estimate the specific unit cost of a particular service from a small set of service providers, assuming that this unit cost is representative of all service providers. Many of the Australian studies extrapolated from small retrospective surveys of women experiencing violence as well as from service providers.

Unit of Analysis

The unit of analysis used in a methodology can present a problem, particularly when that unit of analysis is the individual. According to Yodanis and Godenzi, when

individuals are the unit of analysis, "estimates are not based on data from particular agencies, organizations, or business … [but are instead] calculated on women's use of unspecified service agencies and experiences in unspecified work places" (Godenzi and Yodanis 1999: p.5). This has policy implications in terms of not offering agencies, organizations, or businesses ways in which they can provide better services for victims of IPV (Godenzi and Yodanis 1999).

Time Frames

Many of the studies calculate the costs of violence on an annual basis but often average costs across non-consecutive years due to the lack of data over a consistent period of time. A consequence of this is that "differences are not always well understood and … sometimes [result] in inappropriate comparisons being drawn between studies that are not in fact comparable" (CDC 2003: p.5).

Population Inferences

The misuse of population inferences is evident throughout the various studies. This methodological tool becomes a problem when extrapolation is done incorrectly. In a study by Jewkes et al., which took place in three South African provinces:

> The level of abuse in the previous year reported in the Eastern Cape was twice that found in the South African Demographic and Health Survey, one third more in Mpumalanga, and 15 percent less than that reported in the Northern Province (Jewkes et al. 1999: p.10).

These figures show a huge discrepancy in prevalence between the three provinces as well as a large deviation from the national statistics from the South African Demographic and Health Survey.

1.9 Data Requirements and Collection Methods

In most of the costing studies surveyed, there are significant gaps in data available to estimate both the direct and indirect costs of IPV. In countries such as Canada, the United Kingdom, and the United States, national surveys on victimization provide basic data on prevalence, service utilization (primarily health services), and lost days of paid work and housework. Even such surveys tend not to have data on access to criminal justice systems or utilization of courts, shelters, civil legal systems, and so on. All studies have had to employ various methods to collect data, such as primary surveys and collating evidence from small surveys. Most studies also make crucial assumptions to fill in for unavailable data. Stanko et al. incorporated several data collection methods, which avoided sole reliance on self-reporting or availability of service providers' records. They conducted a postal survey, records searches, a waiting room survey of women, case studies, and meetings with service providers (Stanko, Crisp et al. 1998). The collection of data from a number of sources allowed for a costing analysis that was based on a variety of data from qualitative and quantitative sources. Walby culled data from national surveys on victimization and relevant costing studies conducted by other agencies, and supplemented data gaps by small surveys. Many of the Australian studies relied primarily on small-scale retrospective studies to get precise data on service utilization and unit cost, and used available prevalence data to extrapolate for regional or national costs.

1.10 Lessons for Building a Costing Framework for Developing Countries

From the literature review, certain key lessons emerge for building a costing framework for developing countries. **There are seven essential steps required for implementing such a framework, which must also be considered in its design:**

- Define clear objectives for undertaking the costing exercise.
- Identify the level of aggregation most appropriate for the objectives of the costing exercise.
- Develop an operational definition of IPV that captures the experiences of the largest number of women.
- Map the help-seeking behavior of victims of IPV to determine the relevant services to consider in the costing exercise.
- Map the services available for victims of IPV.
- Determine which method or mix of methods is relevant.
- Supplement available data with appropriate surveys to fill data gaps in order to limit the assumptions that are made in the costing exercise.

Section 2: Costing Framework of IPV for Developing Countries

While the existing cost studies point to which costs can be estimated with what methods, few are directly applicable to most developing countries because of different social norms on the acceptability of violence, the lack of a policy framework and information systems, and differences in economic structure which affect valuation.

2.1 Methodological Challenges in Developing Countries

In many developing countries, IPV is perceived as a private issue, and therefore is not yet recognized as a social problem or an issue that deserves policy action. As a consequence, many developing countries have no specific legislation addressing IPV even though most are signatories of CEDAW (Convention to End Discrimination Against Women). The lack of social and political will reflects norms of acceptability of violence against women when it is not perpetrated by a stranger. This silence on IPV also translates to minimal service provision to address it, especially by the state (national, provincial, or local). Utilization of services by women also is limited due to socio-cultural norms, distrust of service providers, and fear of retaliation. Given this lack of response and scant national resources committed to responding to IPV, estimating the costs of violence against women may be a lower priority for national governments than other actions.

The methodologies in the existing cost studies also are compromised by the virtual absence of any coherent information systems. Few developing countries have nationally representative surveys from which to estimate prevalence rates. Furthermore, since law enforcement, health, and other sectors in many low- and middle-income countries do not perceive IPV as a problem, they do not record information or maintain systematic information systems on service utilization rates. Finally, there are gaps in information about actual help-seeking behavior of women experiencing violence. All these gaps in information, coupled with limited understanding of the consequences of violence, make it difficult to build a data set from which to calculate average unit costs.

The economic structure of many developing countries also poses a challenge for cost estimation. In many developing countries, formal labor markets are less developed and informal economic activity predominates. According to the International Labor Organization (2004), in developing and transitional economies, informal sector jobs comprise one-half to three-quarters of all non-agricultural employment. In many countries – Benin, Chad, Guinea, and Kenya, for example – most of the female non-agricultural labor force is in informal employment. Moreover, in many developing countries, the household is a site of both production and reproduction. Women perform a large amount of paid and unpaid labor, including reproductive work, subsistence work, and community production. The extent of informal and unpaid household production makes it difficult to assign appropriate and accurate values to lost and reduced output and productivity as a result of violence against women.

A framework is needed that would account for these differences. Existing cost studies, as highlighted in the previous literature review, have focused on aggregate costs building on costs of service provision. For developing countries, determining national aggregate costs is highly problematic given both the lack of attention to IPV, lower level of service provision, and inadequate information systems. A better starting point for cost estimation is the household level, given the centrality of the household as a site of production and reproduction. Focusing on losses at the household level would resonate with households, communities, and national policymakers because it would highlight the implications for poverty, a central concern of these economies.

2.2 Designing a Cost Analysis

When doing a costing analysis, it is important to have a clear operational definition of the realm of violent

behavior. The definition used by Green (1996) provides a starting point:

> Behavior adopted by a person to control their victim that results in physical, sexual and/or psychological damage, forced isolation or economic deprivation, or behavior that leaves the victim living in fear. These behaviors are perpetrated by someone who is known to the victim (Green, Murfett et al. 1996).

This definition can be operationalized in surveys by asking questions about specific behaviors: physical (slapping, kicking, hitting, choking, beating), psychological (insulting, demeaning, threatening, isolation, abandonment), sexual (rape, sexual coercion), and economic (deprivation of food, income, or other material goods).

The types of relationships to be included in a study will depend on which type predominates within a given country. For example, in South Africa, the universe would cover marital, co-habiting and dating relationships because all of these different forms of intimate relationships are present, whereas in India, marital relationships are the norm.

2.3 Methods of Data Collection

As noted above, the most appropriate and useful level of aggregation for collecting IPV data in developing countries is at the household level. However, many developing countries do not yet have baseline data that can be used to calculate a representative prevalence rate of IPV. Rather, existing data on prevalence comes from small-scale surveys from which it is difficult to infer generalizations. Therefore, one approach is to undertake a nationally representative survey or to embed a violence module in an existing national survey such as the Demographic and Health Surveys. A far less expensive alternative is to identify representative communities in which household-level data would be collected and community-level prevalence rates estimated.

Another option is to survey service agencies to get a sense of institutional service utilization rates. Sometimes, qualitative community-level studies can be used to identify the range of prevalence from low to medium to high, cross-checked with institutional records.

Surveys have collected information on both current violence (that is, any act of violence experienced within the last 12 months) and violence experienced at any point in the lifetime of the relationship. For costing purposes, the prevalence rate should be for current violence.[2]

The measurement of prevalence needs to be supplemented with a measure of victimization or frequency of violent acts. Women usually do not face a single incident of violence, but more typically face repeated abuse. Women also face different forms of abuse, which has implications for different types of service utilization. The victimization rate is the number of violent incidents of each behavior for each type of violence (e.g., the number of incidents of slapping v. incidents of kicking). Reliable prevalence and victimizations rates are basic building blocks for developing a comprehensive estimate.

Apart from establishing prevalence and utilization rates, there is an extensive set of data, which will be discussed below, that needs to be collected for developing costs estimates. Given these data requirements, we recommend selecting nationally representative communities in which small household surveys and service provider surveys can be undertaken to gather prevalence data, utilization data, and other specific cost data.

2.4 Costing Framework: What Costs to Calculate?

A number of questions need to be answered in order to develop a relevant costing framework for developing countries. First, what is the purpose of a costing exercise? Second, what costs should be estimated? Should the focus be on actual or potential costs? Is it necessary to break down costs into direct and indirect? Should the focus be on service provision, expenditure by households, loss of income, or loss of output?

[2] Although the costs of violence are multiple and may accrue over time, it is difficult to collect all the information that is required in order to estimate these costs. Questions in household surveys normally cover a shorter time frame (e.g., a month or a year); those questions that ask about lifetime prevalence are plagued with recall problems.

Given the predominance of household economies in low-income countries, it is important to first estimate the economic costs to households of violence against women. To mobilize communities, it is also important to develop estimates of costs at the community level. Two types of community-level costs are important: the cost of service provision and the cost to businesses. Both of these are important for demonstrating the drain on resources, which will strengthen the case for prevention. A community-level estimate also would give service providers empirical evidence to advocate for the required resources to meet the potential demand for services.

The framework below considers a cost to be the direct or imputed value of goods and services used to prevent and respond to IPV. The community-level entities could be either government or non-government. Although there are non-monetary costs such as behavioral impacts, health impacts, or inter-generational transmission of violence, this framework does not consider such non-monetary costs given the lack of applicability of existing methodologies to developing countries. The discussion below focuses only on monetary costs at the household level and the community level, which includes service provision by community-level entities and the economic cost to businesses.

Level of Analysis	Cost Category	Types of Costs	Data Requirements
HOUSEHOLD COSTS			
	Out of Pocket Expenses		Actual expenditure on transportation and all fees paid for each service per each incident
	Medical Costs	Emergency Room care Hospitalization Outpatient visits Nursing home care Dental care Mental health care Medication Transportation Ambulance Surgery	
	Criminal Justice	Incarceration Court appearances Emergency protection order Temporary restraining order Probation	
	Housing and Refuge	Hotel Transition homes Shelters Rental housing	
	Legal Services	Mediation Divorce Legal counsel EPO TRO	
	Social Services	Counseling Rehabilitation	

Level of Analysis	Cost Category	Types of Costs	Data Requirements
HOUSEHOLD COSTS			
	Reduced Income	Lost days of paid work immediately following incident (for victim, perpetrator, and other adults) Lost days of paid work in order to access services (for victim, perpetrator, and other adults)	1) Number of days (paid and unpaid) lost per each incident by woman, husband and other family members 2) Number of days lost in accessing services per each incident (woman, husband, and other family members) 3) Weighted average wage rate for women and men
	Loss of Household Work	Lost days of household work immediately following incident for victim Lost day of household work due to accessing services (for victim and other adult women)	1) No. of lost days of household work by woman per each incident 2) No. of lost days in order to access services 3) Imputed market wage
	Loss of Productivity	Reduced output per reduced labor input (for woman, husband, other adults) in household enterprises	Reduced output per labor input for woman, husband and other adults in household enterprises
	Impact on Children	Missed schooling	1) Number of missed school days for each incident 2) Annual school fees paid 3) Annual number of school days
COMMUNITY/THIRD PARTY			
	Cost of Provision of Services		1) Operating budgets of each service 2) Proportion of total cost due to domestic violence 3) Average unit cost based on human resource cost each service (time, salary, training, etc.) and capital costs for each service 4) Proportion of women utilizing the service 5) Median number of days service is accessed
	Medical Costs	Emergency Room care Hospitalization Outpatient visits Nursing home care Dental care Mental health care Medication Transportation Surgery	

Level of Analysis	Cost Category	Types of Costs	Data Requirements
COMMUNITY/THIRD PARTY			
	Criminal Justice	Incarceration Prosecutors Emergency protection order Temporary restraining order Probation Counseling Rehabilitation	
	Housing and Refuge	Transition homes Homeless shelters Hotel vouchers	
	Legal Services	Mediation Divorce Legal counsel Emergency protection orders TRO	
	Social Services	Counseling Rehabilitation	
BUSINESS			
	Output loss	Reduced productivity	1) Labor input after incident of violence for victim, husband and other adults 2) Average daily labor input 3) No. of annual working days
	Expenditures on direct service provision	Counseling services Legal aid Skills training Advocacy campaigns	Actual expenditure for programs

At the household level, there are four major types of economic costs: out-of-pocket expenditures for accessing services, reduced income, loss of household services, and loss of productivity in household enterprises and services. Out-of-pocket expenditures include the amount of money that households pay for medical services, criminal justice services, civil services, and housing or refuge services. Reduced income includes not only the days of paid work lost immediately following the incident but also days lost in subsequent efforts to seek resolution (e.g., for mediation, criminal court processes, follow up medical care). These lost days are not just incurred by the victim but also by the perpetrator and other adults within the household. The loss of household services refers to time lost to provide such household services as meals, washing, and other tasks immediately following the incident as well as time lost due to accessing outside services. Loss of productivity is the reduced output due to reduced labor input in the household enterprise and in other household services by the victim, the perpetrator, and other adults per incident of violence.

There are social costs for the household, some of which have a direct economic component. For instance, children may miss school even though the household may have paid school fees. Household members, including children, may be more likely to use alcohol or abuse other substances, taking away from household income. Lost income could have a range of detrimental effects, such as reduced food consumption, which in turn will adversely affect the nutritional status of children. An additional dimension of these costs is that they have an impact on future incoming earning capacity. Children missing school seems to be the most important of these costs. A study in Nicaragua indicated that 64 percent of children of abused women missed one year of school and discontinued their education four years earlier than children of non-abused women.

For many poor households, children's education is an important economic investment, and disruption in that education is a grave cost to the household.

At the community level, the major economic cost is the provision of services across different sectors. Medical services include emergency room care, hospitalization, outpatient visits, dental, surgery, and mental health, among others. Criminal justice services include policing, prosecution, incarceration, and probation. Civil legal services include mediation, divorce, and legal aid. Social services include counseling and rehabilitation. A final important category is housing and refuge services, which include the costs of maintaining shelters and transition homes. The financing for these services comes from households, government revenues, outside donor assistance, or businesses that pay for these services directly.

Businesses also incur losses, including output loss due to reduced productivity and absenteeism, direct expenditures on service provision, and turnover and retraining.

2.5 Methodologies for Estimating Costs

Within existing costing studies, there are several methodologies for estimating costs. The first is the willingness-to-pay method, which establishes the amount communities are willing to pay to avoid the risk of violence. This has generally been used in relation to a broader category of personal crime rather than IPV. An advantage of this methodology is that it collects newly targeted information rather than relying on scattered and unrepresentative data. However, the willingness-to-pay methodology is based on the assumption that the individual recognizes the potential negative outcomes and prefers to minimize them. This methodology is only feasible where there is some understanding of the consequences and costs of IPV. In communities where IPV is widely accepted as a norm and not necessarily a negative behavior, it is not feasible to obtain meaningful information on what communities will invest to reduce IPV.

The second methodology estimates the costs of service provision. This methodology does not account for prevalence rates of violence against women, but apportions the overall costs of services to different types of service usage. For instance, to estimate the costs of police response to IPV, the first step would be to determine the services offered by the police department. It then estimates what proportion of those services was in response to IPV. The final step is to apply this proportion to the police department's total operational budget to determine the costs of service provision for IPV. Because this method does not need data on prevalence, unit costs, or utilization rates, it is particularly useful in doing a "quick and dirty" estimate of the costs of IPV.

The most common methodology in the literature is the cost accounting methodology, which aggregates costs across sectors utilizing prevalence rates, service utilization rates, and average unit costs within each sector. It is particularly appropriate to those contexts where such data are available. The drawbacks of this methodology are that (1) there is potential for double counting, (2) costs are not identifiable by who pays, and (3) time frames of data within sectors are inconsistent, making aggregation across sectors difficult.

A fourth methodology is propensity score matching, which compares the mean outcomes – such as earnings loss or labor force participation rates or educational outcomes – of those who experience violence and those who have not experienced violence. While this is a useful methodology for highlighting the impact of violence, the estimates are partial and do not provide total costs for households or communities.

There is no one ideal methodology for estimating costs in developing countries. To a large extent, the purpose of the costing and the audience for which the estimates are intended should determine which methodology is most appropriate. We have argued above that given the lack of attention to IPV in most developing countries, the immediate focus should be on the monetary costs of IPV at the ***household and community levels***. To estimate these costs, different methodologies would need to be applied for specific costs at each level.

2.6 Cost Models for Households, Communities, and Businesses

Estimating monetary costs of IPV at the household level and the community level has two parts - community service provision, both formal and informal; and business costs. The total cost model is therefore:

$$\text{MCIPV} = THC + TCSP + TBC$$

where MCIPV is the monetary cost of IPV, THC is total household cost, TCSP represent community level costs of service provision, and TBC is total cost to businesses.

Household Cost Model. Within the household, the primary costs that need to be considered are out-of-pocket expenses, reduction in income, loss of household work, and productivity loss. This can be written formally as:

$$THC = \sum_{1}^{n} HC_i$$

For each household, the cost equation is:

HC=

$$\sum_{i} p_i S_i + \sum_{i} \sum_{j} wL_{ij} + \sum_{j} w_i^{*} L_j^{'} + \sum_{i} \sum_{j} w_i \left[\left(h_{ij} / N \right) L_{ij} \right] + \sum_{j} w_i^{*} \left[\left(k_j / A \right) L_{ij}^{'} \right] + \sum_{i} \sum_{j} \left(MD_{ij} / TD \right) SF$$

where pi is the price of service i
Li is the number of days of formal and informal employment lost for household member i per incident j
wi is the actual wage rate for household member i
Lj is the number of days of household work lost by the adult female for each incident j
*w*i is the imputed wage for household work*
hij is the number of hours actually worked after each incident j for each household member i
N is total number of hours in a working day
kj is the number of hours of household work actually worked after each incident j
A is the total number of hours required for household work
MDij is the number of missed school day for each incident j for each child i
TD is the total number of school days in the year
SF is the total amount of school fees paid for the year

The first term represents the out-of-pocket expenses for the household in accessing service *i*. The second term represents the days lost of paid and unpaid work for the *i*th individual for the *j*th incident. For unpaid work, the wage will be the imputed market wage.[3] The third term represents the loss in days of housework and is valued at the imputed wage of those services in the economy (e.g., cooks, laundresses). The third term represents the productivity lost, with h*ij* representing the numbers of hours spent by the *i*th woman in paid and unpaid work after the *j*th incident divided by the total number of working hours in a day multiplied by the annual number of working days. This would be repeated for all other members affected by the household. The fourth term represents the value of the loss of household work with k*j* representing the number of hours spent on housework by a woman after the *j*th incident divided by the number of hours usually spent on household chores multiplied by the number of days of work lost by the *i*th woman immediately after the *j*th incident multiplied by the imputed wage rate, *w*i*. The final term in the equation represents the loss to household with children missing school. *MDij* is the number of days missed from school for each incident. TD is the total school days, and SF is the total school fees paid.[4]

[3] A common method for calculating the imputed wage for unpaid productive labor within the household in developing countries is to take the minimum wage for casual labor.

[4] This model does not attempt to determine the long term impact of children missing school on the future earnings of the household.

Community Service Cost Model. As noted earlier, the total cost of service provision at the community level is the summation of costs across all services.

$$TCSP = \sum_{i=1}^{n} CSP_i$$

For each service, the cost of service provision can be formalized as:

$$CSP = \left((\text{w.L} + \text{p} * RM) \Big/ (\text{w.L} + \text{r.K} + \text{p} * \text{RM}) \right) * n_i$$

where the numerator is the variable cost for a particular service, including the salary cost (with w as wage and L as number of staff) and material cost such as supplies, training materials, and so on (p is the price and RM is the amount of material); the denominator is the operating budget for a service; the ratio represents the unit cost; and n*i* represents the number of women using the service or the number of times a service is utilized.

Business Cost Model. The total cost to businesses can be expressed as:

$$TBC = \sum_{i=1}^{n} BC_i$$

The cost to each business is formalized as

$$BC = \overline{\text{w}} \left\{ \sum_{\text{i}} \left[\text{L}_\text{i} - \sum_{j} \left(\frac{q_{ij}}{N} \right) L_{ij} \right] \right\} + \left(\overline{w} L + r.K \right)$$

where q*ij* is the number of hours worked by the *i*th woman after the *j*th incident and N is the total number of hours of work multiplied by the number of days the *i*th woman had lost after the *j*th incident. Note that this has been subtracted out from *i*th woman normal man days (L*i*). The second term is the total expenditure incurred by the business for providing the service.

A potential problem in estimating costs in this formal model is the problem of double counting. If the household pays out-of-pocket expenses for utilizing services, it is important that these expenses are recognized when estimating the cost of service provision. For example, if households pay a user fee for medical services, to avoid double counting it would be essential to reduce the average cost of a service by the amount that households pay. Or if households face loss of income, this needs to be accounted for when estimating the economic output loss of businesses.

We would argue that developing a comprehensive estimate of cost at the household level is the first critical step in estimating cost of IPV for developing countries. Household-level costs would underestimate the total cost to the national economy to the extent that they do not include the non-household resources provided for responding to violence. However, in developing countries, with little provision of formal services, this underestimation may be a small proportion of the household costs.

Whether the estimation focuses on the household level only or both household and community level, what are the actual steps in estimation required at each level? The next section explains the steps involved in estimating each category of cost along with an indication of the data required.

Section 3: Guide to Estimating Monetary Costs

This section discusses what data is needed to conduct a cost estimate of IPV, and then lays out a methodology for estimating household costs (3.2), service costs (3.3), and business costs (3.4).

Before conducting a cost estimate, the geographical area to be covered must be determined. There are two possible alternatives. One is to conduct a nationally representative survey of households, service providers, and businesses for estimating national costs. The second is to focus on specific nationally representative regions/localities and estimate costs at the household and community level. In a country where the prevalence of IPV varies across regions or where type and extent of services vary considerably, estimating costs at specific regional levels would be the better option. Additionally, where IPV is not perceived as a problem by policymakers, grounded estimates across various regions may be more effective than national costs. Aggregate costs always run the risk of lack of empirical rigor, which is then used to debunk the validity of the estimates. What is recommended is that a multisite costing exercise be undertaken in representative regions/localities. Indicators for determining national representation should include, apart from the usual demographic and economic variables, norms of acceptability of IPV and level of response to IPV.

An operational definition of violence is also needed because this is key to determining the prevalence and victimization rates that are critical data for estimation of costs of IPV. The suggested operational definition used in the methodology below is the one discussed in section 1.

Finally, a time frame must be established. The time frame most commonly found in the literature is the past 12 months, which is used to develop an annual cost. While this is the ideal, one problem is recall. Usually the shorter the time period, the greater the recall. At the same time, violence has long-term impacts that may not be captured in a shorter time period. One compromise, therefore, is to focus on what the woman recalls as significant episodes of violence. For example, ICRW's study in India (2000) probed respondents specifically for incidents in the last year in which injuries had occurred, as opposed to asking them to recall all episodes of violence; the survey collected detailed information on service utilization and missed work for each incident. To be able to address productivity loss, additional questions would need to be asked on the incidents' impact on the work habits in the last year.

Below is a guide for estimating specific costs at each level. The first step is determining women's help-seeking behavior because this will help give an overall sense of the IPV costs involved in any given study. The next step is to calculate the total household cost, which consists of out-of-pocket expenses and reduced income.

3.1 Help-Seeking Behavior and Mapping of Services

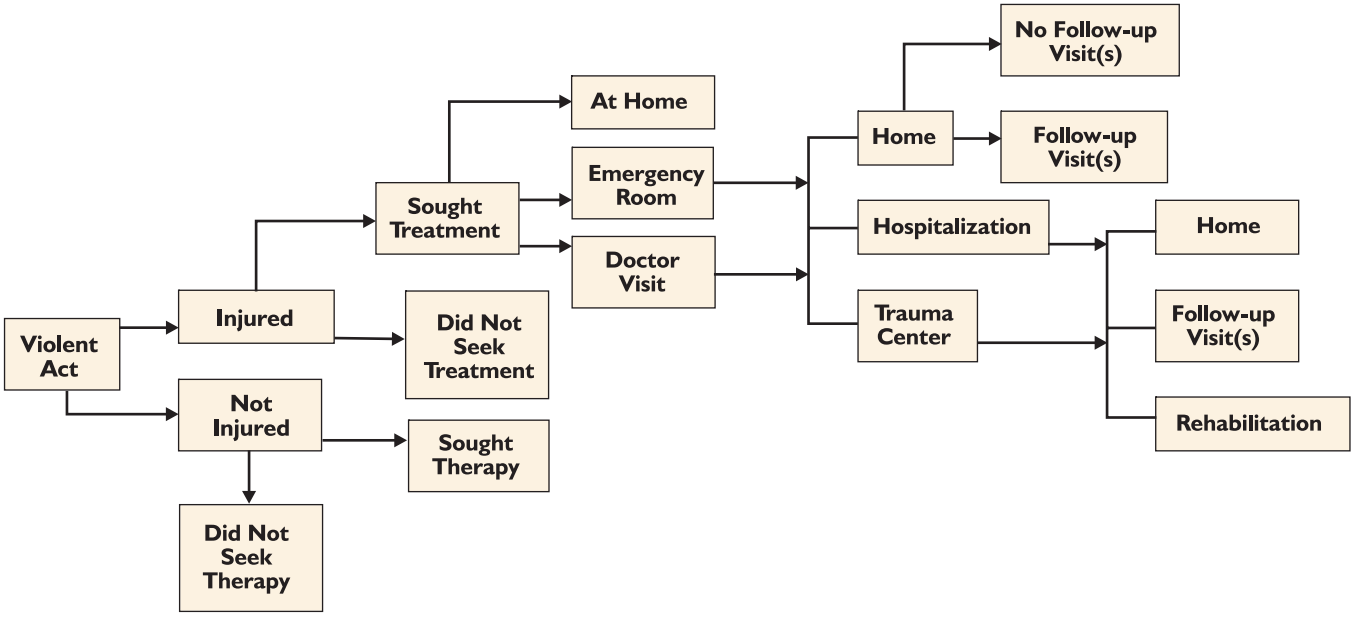
An important first step for estimating specific costs where data is lacking is to map the help-seeking behavior of women experiencing violence and the type of and extent of public or private services that are or should be made available. The tree branch model is a useful tool that can be applied. In Appendix I-V, we present tree branch models for different categories of services widely considered in estimating the cost of IPV: health services, criminal justice, civil legal services, housing and refuge, and social services. The starting point for any service is a woman going to some health service, police station, legal aid cell, or shelter. However, in most developing countries it is likely that a majority of women will not take even this initial step, especially with respect to police stations, legal aid, or shelters. For example, in Bangladesh and Egypt between 47 percent and 68 percent of women surveyed reported that they did not tell anyone about the violence (Heise, Ellsberg et al. 1999). In Nicaragua, where women shared the experience with friends or family, only 17 percent of all women approached the police. In India, while 30 percent of women thought they required health care, less than 10 percent actually sought medical care (ICRW and INCLEN 2000).

This lack of utilization of services is partly driven by the norms of acceptability of IPV. It equally reflects the lack of services available due to the inadequate policy

attention paid to the needs of women experiencing IPV. A mapping of the available services would lead to clear identification of which specific services need to be considered in the costing exercise.

For example, let us trace the path of utilization of services for health. First, it is important to know what proportion of women who experience violence are injured. Among those injured, there is a proportion who seek medical care whether they treat themselves at home, visit a doctor's office or outpatient clinic, or present themselves to an emergency room. Even if an injury does not occur, it is possible that women seek counseling or therapy – even though there is low probability of this in most developing countries. If a woman does actually seek medical care, possible follow-up outcomes might be inpatient care, follow-up visits at the doctor's office or outpatient clinics. If there are multiple incidents of violence, which we noted as one of the main features of IPV across all cultural contexts, services may be accessed more than once.

Health Care System



A low level of utilization of services would underscore the need to focus on estimating both actual and potential costs. Actual costs refer to the costs based on an existing utilization rate and would exclude all those who may need services but do not access them. Thus, actual costs may be significant underestimates of the actual resources required to respond to IPV. Potential costs, on the other hand, are based on the proportion of women experiencing violence who require services regardless of whether they actually seek assistance. This reflects a more realistic estimate of the resources required by communities to respond to IPV. Actual and potential costs should be estimated separately for the household and the community levels.

After the scope of help-seeking behavior is determined, the next step is to calculate costs incurred by a household.

3.2 Household Cost

3.2.1. Household *i*'s Out-of-Pocket Expenses for Services.

a. Health Care Costs:

- Emergency room care
- Hospitalization
- Outpatient visits
- Physical therapy
- Dental care
- Mental health care
- Medication
- Ambulance
- Surgery

For each household *i*,

1. Determine the number of IPV incidents in the last year in which an injury occurred.
2. Determine which one of the above health care services were used after each IPV incident.
3. Determine the number of times a particular health care service was used after each IPV incident.
4. Determine the amount paid out-of-pocket by the household (HH) every time each type of service was used.
5. Determine the median or mean out-of-pocket service cost per service use for each type of service.
6. Multiply the mean or median out-of-pocket cost per service use with the number of times a particular service was used by household *i* to calculate the total health care cost of household *i*.

It is also possible to calculate average number of times of each type of health care service was used due to violence and use this number to calculate HH cost.

Health care costs can be broken up into smaller sub-groups such as mental health costs, physician costs, hospitalization costs, medication costs, etc.

b. Criminal Justice Costs:

A household can have out-of-pocket expenses to access police and legal aid services, especially transport expenses.

1. Determine the number of incidents where police or legal aid services are required.
2. Determine average cost of transport expenses.
3. Multiply number of times with average cost.

Cost of defense is an out-of-pocket item for the perpetrator in the HH.

4. Determine the number of incidents where legal defense was needed.
5. Determine average number of court hearings per incident.
6. Determine whether private defense or legal aid was used.
7. Calculate the average cost of one hearing of private defense, assuming it is fully out of pocket.
8. Calculate the average cost of one hearing of legal aid, assuming it is partially out of pocket.
9. If private defense is used, multiply the number of hearings by the number of incidents in one year in one HH. Then multiply this with the average cost of private defense. If legal aid is used, multiply number of hearings by the number of incidents in one year in one HH. Then multiply this with the average cost of legal aid.

c. Housing and Refuge Costs:

- Hotel
- Transition homes
- Shelters
- Relocation costs and rental housing

If moving out was temporary,

1. Determine if woman in household *i* left the house due to an IPV incident.
2. If so, did she stay at a parent's house, relatives, friends, hotel, transition home or a shelter.
3. Determine number of IPV incidents in one year in the HH.
4. Determine number of days she stayed in a hotel, transition home or shelter after each incident.
5. Determine price of one night stay at a hotel, transition home or shelter.
6. Calculate the mean or median price of one-night stay at a hotel, transition home, and shelter.
7. Calculate total out-of-pocket cost of temporary housing for household *i* by multiplying the number of days stayed with the mean or median price.
8. If went to parents, relatives, or friends, then determine the average transport expenses to each.
9. Multiply average transport expenses by number of time she left the house to calculate out-of-pocket expense.

If moving out was permanent,

1. Get household's spending on furniture as well as amount of first and last months' rent.
2. Find average amount of money spent on furniture and rent.

d. Civil Legal Costs:
For all civil legal cases, legally aided cases versus individually paid cases should be separated. (Walby 2004 does this for domestic violence injunctions, divorces, and family proceedings which include financial provision, child custody issues, combined family proceedings, and mediation.)

For each civil legal service, determine whether it was used by household *i*, how many times each was used in a year, and whether it was individually paid or legally aided.

Individually paid cases are paid fully out of pocket by household *i*.

1. Calculate the average cost of individually paid cases.
2. Multiply average cost by the number of times each household i used the service (or average number of use after an IPV incident).

For legally aided cases, find how much, if any, were paid by the household.

1. Calculate the average out-of-pocket cost of legally aided cases.
2. Multiply average cost with the number of times HH *i* used the service (or average number of use after a DV incidence).

e. Social Services Costs:
Couples' and Family Therapy is one type of social service where there are out-of-pocket costs for the individual/household. Public-provided therapy and private therapy services need to be separated.

Cost of private services is fully out of pocket. Calculate average cost of private services and multiply it by the number of times the service was used by each household *i*.

In government/state-provided therapy services, determine the household's out-of-pocket portion. Calculate average out-of-pocket cost of service and multiply the number of times household *i* used the service with average out-of-pocket cost.

Finally, sum all the out-of-pocket expenses for household *i*[5].

3.2.2 Estimation of Reduced Household Income

Lost days of paid and unpaid work following incident (for victim, perpetrator, and other adults).

In household *i*,

- Victim misses days from work due to injury, legal proceedings etc. Take days lost after each incident and then multiply with the average wage rate of her occupation group.
- Perpetrator misses days from work due to detention, jail, rehabilitation, etc. Take days lost after each incident and multiply with the average wage rate of his occupation group.
- Other household members miss days from work because of transporting victim, caring for victim, etc. Take days lost after each incident and then multiply with the average wage rate of their occupation group.

Lost household work immediately following incident (for victim, perpetrator, and other adults).

Determine the number of lost housework days following an incident of violence.

3.2.3 Productivity Loss for Household Enterprises

Productivity loss of victim due to physical and mental injuries: The number of hours spent by the victim after an IPV incident as a proportion of total number of hours worked multiplied by the number of days lost by the victim after the IPV incident and the market wage rate.

Productivity loss of other members of the household: The number of hours spent by each household member other than the victim after an IPV incident as a proportion of total number of hours worked multiplied by the number of work days lost by each household member after the IPV incident and the market wage rate.

[5] Out of pocket service expenses for household *i* = " [# of times service j was used * median or average out of pocket cost of service j]
j = health care, civil legal, shelter, social services

To capture reduced productivity in doing household chores, take the time spent daily on household work after the incident and divide it by the total number of hours a day normally spent on household chores. Multiply it by days lost and the imputed average wage rate.

3.3 Cost of Service Provision

Determining costs of service provision at the community level involves four basic steps. The first step is to determine if there is any proportion of the cost borne by households. For example, households pay user fees or buy medicines for health care costs. To avoid double counting, this cost needs to adjusted. Below are two ways of making this adjustment:

1. Get percentage of cases in the health care system which involve IPV.

   Get data on aggregate health care budget.

   The cost of IPV to the health care system is proportional to the share of cases that involve domestic violence. If 19 percent of cases in the health care system involve IPV, the amount spent on IPV is 19 percent of the aggregate spending on health care.

   We can calculate aggregate household out-of-pocket spending on health care due to IPV in one year—using data on relevant IPV statistics—and subtract this amount to find the cost borne by the state/system.

2. From survey data, obtain information on households' out-of-pocket cost versus the total cost. Use this information to estimate what percent of costs, on average, are actually out-of-pocket. Assume this average holds in the aggregate as well. The cost of IPV to the health care system is proportional to the share of cases that involve domestic violence. If 19 percent of cases in the health care system involve IPV, the amount spent on IPV is 19 percent of the aggregate spending on health care. The percent figure estimated from the survey gives the share of this amount that comes out of the pockets of households. The rest is the cost of service provision to the state.

The second step is to determine unit cost of the service. Unit cost would include salaries, cost of materials, training costs, and infrastructure. For some services such as health services, there may be costing studies available that indicate the average cost of visiting a doctor or being hospitalized for a day. However, in many developing countries such information for other services, such as police or courts, may not be available. In the absence of unit cost data two options are available.

1. One, widely used in cost studies, is to determine the proportion of case load that is due to IPV and apply that proportion to the total operating budget of the service to determine the cost of service provision due to IPV.
2. The other is to build an average cost. An hourly cost of service provision can be determined by dividing the operating budget by total person hours. Through a survey of the service provider, the number of hours required to provide service for an IPV case can be determined. By multiplying the hourly cost with the average number of hours, a unit cost for service provision for IPV can be determined.

If a unit cost is determined, the third step is to determine the utilization rate of the service. Utilization rate can be determined through a household survey or through a survey of service providers. One problem with service data is that not all who used the service would be recorded as having used the service due to IPV. Another difficulty is that utilization data captures only a small proportion of those who require services as a large number of women may not seek help. An option adopted in some costing studies to address this second problem is to assume a ratio of those likely to use the service – for example for every woman to call the police, an assumption is that there are five additional who might call. A better option is to determine utilization rate through a household survey. While this utilization rate may still be an underestimate, it will at least capture all who used a service, even if they are not identified in service records as seeking help due to IPV.

Finally, the utilization rate is multiplied with the unit cost to determine the cost of service provision for each service.

3.4 Cost of Business

Determining the cost to businesses involves three major elements:

- Output loss due to increased absenteeism. This loss can be estimated through surveys and cross-referencing with payroll records.
- Output loss due to decreased productivity. Productivity loss can be established through workplace surveys. WHO has tested a Health and Performance Questionnaire (HPQ), which could be adapted to developing countries (WHO 2002a).
- Expenditure on provision of services: health insurance, counseling services, legal aid, and skills training. This data can be collected from management. This estimation needs to take into account and adjust for household and state spending on health, counseling, and legal aid to make sure there is no double counting.

Section 4: Summary and Conclusions

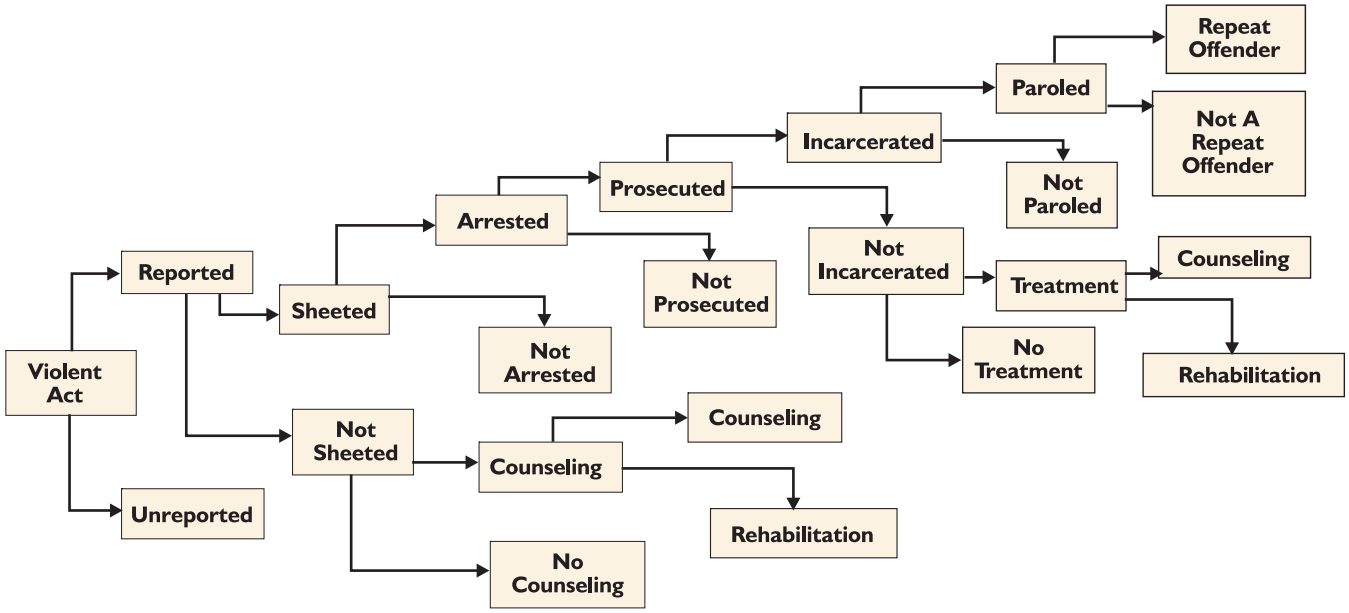
In this paper, we have attempted to develop a costing framework of IPV that is relevant to developing countries. We have argued that in such countries, the focus of attention needs to be on developing cost estimates at the household and community levels in order to galvanize national policymakers, civil society, and communities to address the pervasive phenomenon of IPV. Once a policy framework and specific public responses are in place, the exercise can be broadened to highlight the resources that are needed for effective public responses and to demonstrate the cost-effectiveness of interventions.

While providing increased resources for services to address IPV is urgent, the most effective solutions to preventing IPV lie in mobilizing communities to transform norms on the acceptability of violence within families. To this end, household cost estimates demonstrating the drain of resources that IPV imposes on family economies would be important evidence for motivating behavior change. Moreover, many civil society groups working to prevent and respond to IPV in developing countries are acutely aware of the costs of such violence and highlight such costs in their awareness-raising campaigns. Specific monetary estimates of household costs would help these activists and campaigns to demonstrate the enormous negative impact of IPV on households and communities.

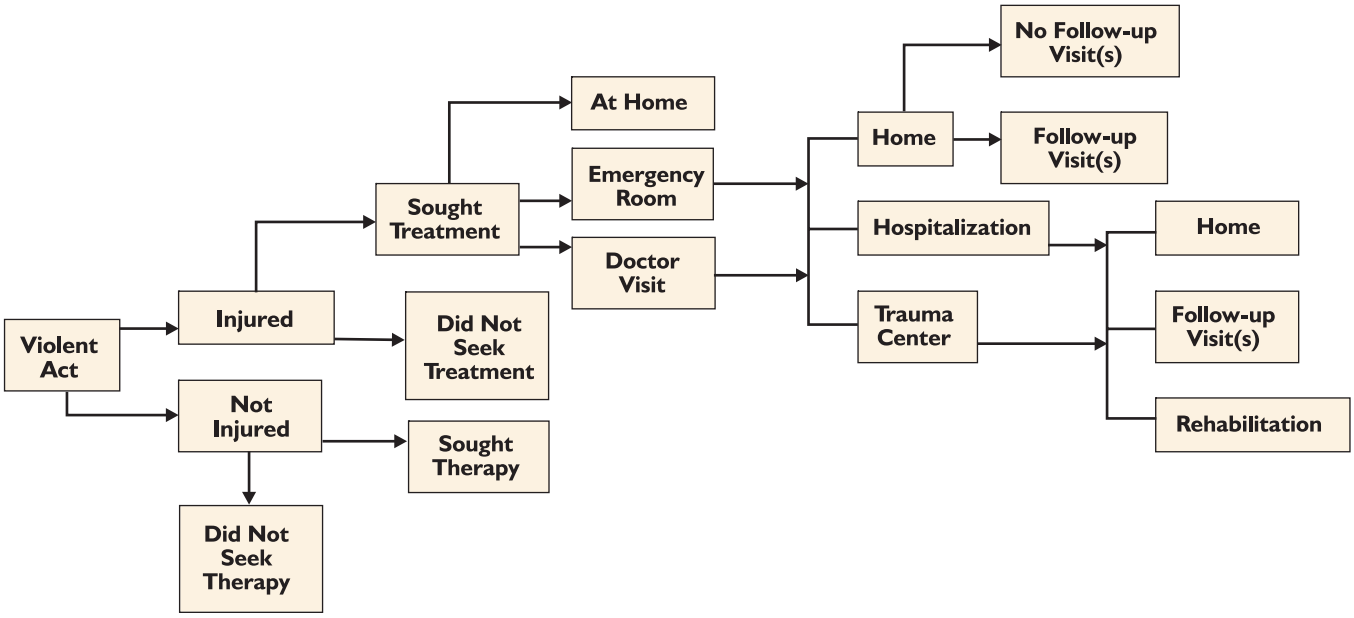
Therefore, the costing framework laid out here focuses particularly on household-level costs. A step-by-step guide on estimating the components of household- and community-level costs has been provided to demonstrate the feasibility of estimation. As indicated, however, new data are needed to make these estimates. This framework can be used to advocate for investment in such data collection as well as improving and maintaining other information systems at the community service provision level.

This framework is not only relevant for IPV, which is the most common form of gender-based violence, but also can be applied to other forms of gender-based violence such as dowry violence, incest, and female genital mutilation. Demonstrating concretely the economic consequences of IPV will lay the basis for estimating the broader costs of violence against women in all of its forms.

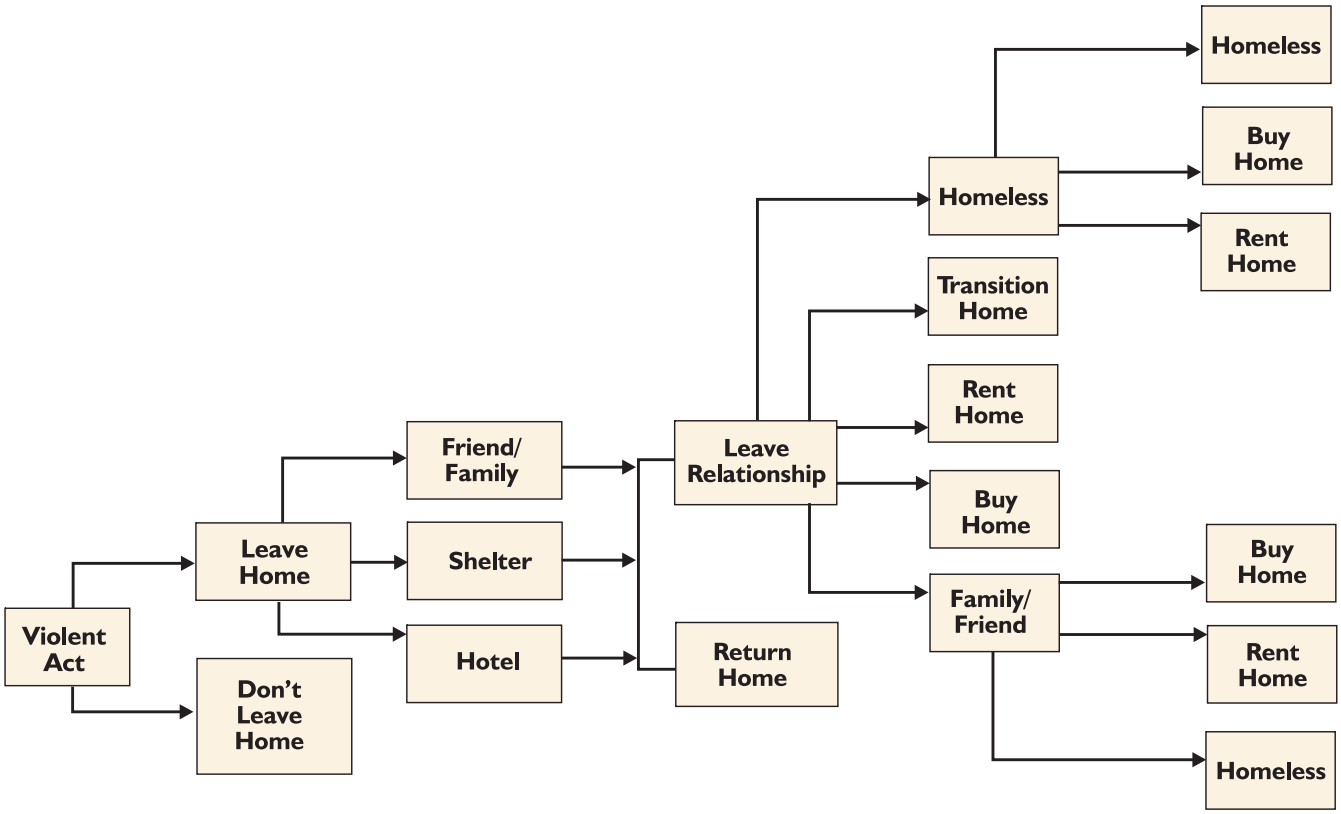
Appendix I:
Mapping of Help-Seeking Behavior, Criminal Justice System



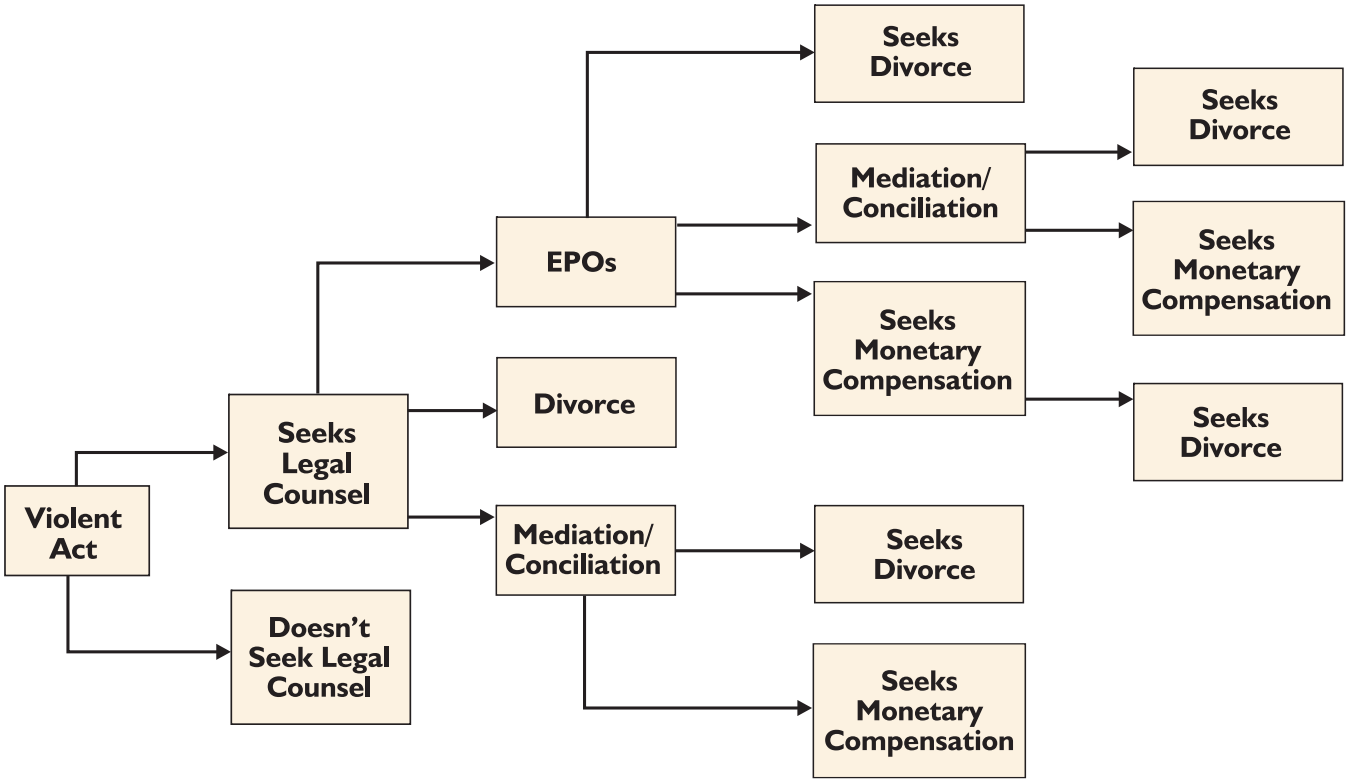
Appendix II:
Mapping of Help-Seeking Behavior, Health Care System



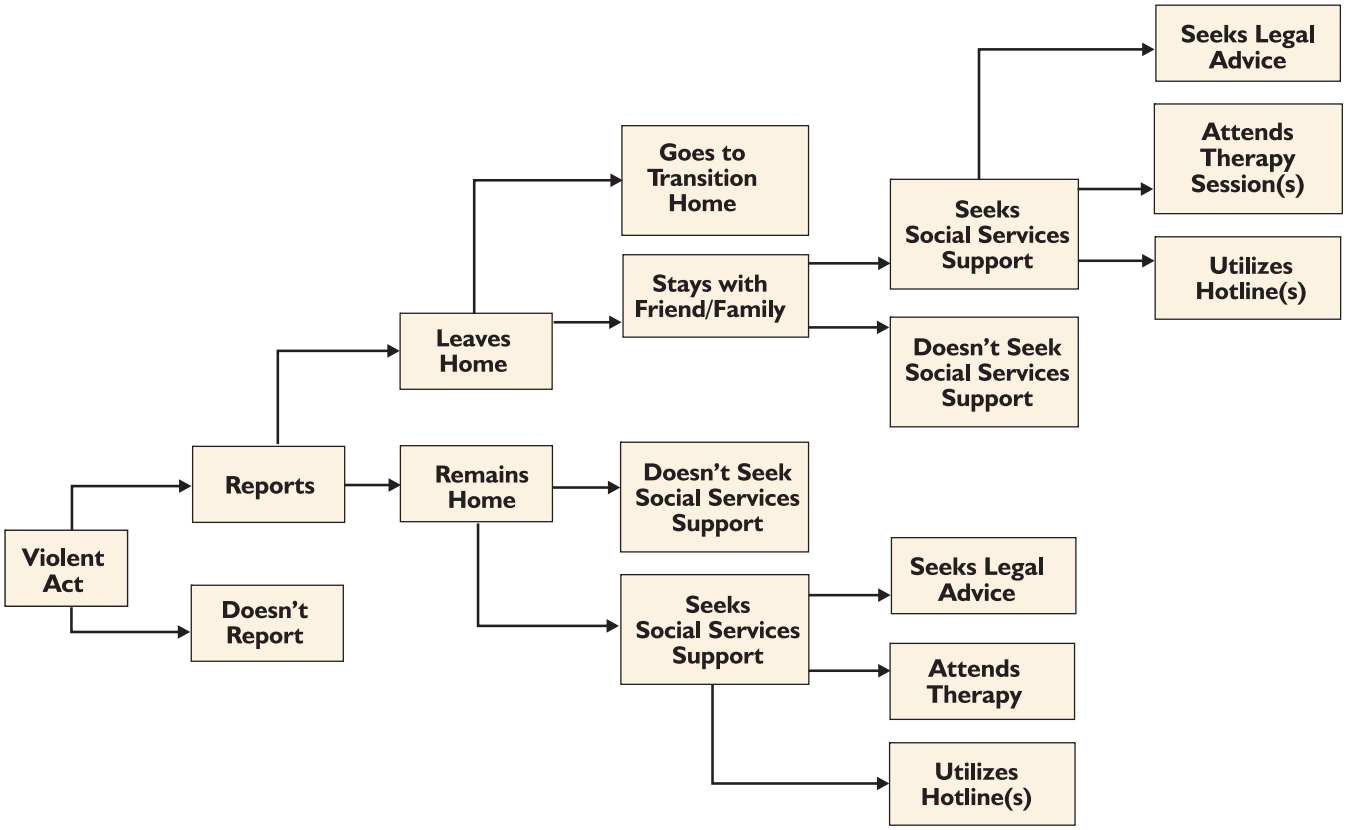
Appendix III:
Mapping of Help-Seeking Behavior, Housing and Refuge



Appendix IV:
Mapping of Help-Seeking Behavior, Civil Legal Services



Appendix V:
Mapping of Help-Seeking Behavior, Social Services



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